

Appl No.: 10/623,227
Reply to Office Communication of April 25, 2007

Atty. Dkt. No:
UCI-273DIV

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1 – 36 (Canceled).

Claim 37 (Currently Amended). Carbon particles having surface filaments ~~used in oil spills,~~ comprising in combination:

a plurality of carbon filaments that are approximately one micron in mean diameter, the carbon filaments consisting ~~produced solely of~~ from thermocatalytic decomposition of hydrocarbon fuel in the presence of carbon black catalyst;

a structure of loose curved elongated worm shaped filaments, with a portion of the structure being substantially hollow, and each of the loose curved elongated worm shaped filaments being substantially of tubular, with longitudinal uniformity and of graphitic structure; and

a hydrophobic property of oil film adsorption from a surface of water.

Claim 38 (Canceled).

Claim 39 (Currently Amended). The method of producing carbon particles having surface filaments of about one micron mean diameter, a structure of loose curved elongated worm shaped filaments, with a hollow portion, and each of the filaments having a tubular, longitudinal uniformity, of graphitic structure, consisting of:

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a(1) passing electrical current through catalytic material that consists solely of ~~carbon~~
~~black~~ a carbon-based material and;

a(2) heating the catalytic material consisting solely of ~~carbon-black~~ a carbon-based
material to about 850°C to about 1200°C;

b) passing a stream of hydrocarbon fuel through the catalytic material consisting solely of
~~carbon-black~~ a carbon-based material with production of hydrogen-rich gas and carbon with
filamentary surface deposited on the surface of the catalytic material; and

c) recovering carbon particles with a filamentary surface, wherein the carbon particles have
surface filaments of about one micron mean diameter in a structure of loose curved elongated
worm shaped filaments, with a hollow portion, and each of the filaments having a tubular,
longitudinal uniformity, of graphitic structure.

Claim 40 (Canceled).

Claims 41 – 43 (Canceled).

Claim 44 (Currently Amended). The carbon particles ~~having surface filaments used in oil~~
~~spills~~ of claim 37, wherein the plurality of carbon filaments are produced in the presence of
carbon-based catalyst materials.

Claim 45 (Currently Amended). The carbon particles ~~having surface filaments used in oil~~
~~spills~~ of claim 44, wherein the plurality of carbon filaments ~~are~~ have a diameter of from
approximately four to approximately 2000 nm ~~in diameter~~.

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Claim 46 (Currently Amended). The carbon particles ~~having surface filaments used in oil~~
~~spills~~ of claim 44 wherein the carbon based materials are selected solely from carbon black (CB).

Claim 47 (Currently Amended). The carbon particles ~~having surface filaments used in oil~~
spills of claim 44, wherein the wherein the plurality of carbon filaments form an "octopus" like a
loose, curved, elongated worm shaped structure as shown in Figure 4.

Claim 48 (Currently Amended). The carbon particles ~~having surface filaments used in oil~~
~~spills~~ of claim 47, wherein the "octopus" structure consists of ~~[a]~~ loose, curved, elongated worm
shaped filaments, and wherein a portion of the filaments is hollow, tubular and longitudinally
uniform.

Claims 49 - 50 (Canceled).

Claim 51 (Currently Amended). The carbon particles ~~having surface filaments used in oil~~
~~spills~~ of claim 48, wherein the hydrophobic property includes:

~~particles scattered over the surface of an oil spill pellicle, wherein the particles breakup the~~
~~oil pellicle and form a plurality of separated oil/carbon isles~~

a particle structure that functions as a sponge and readily adsorbs oil from a water surface.

Claims 52 - 54 (Canceled).

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Claim 55 (Previously Presented). The method of claim 39, wherein the catalytic material is solely the carbon black.

Claim 56 (Currently Amended). The method of claim 39, wherein the catalytic material consists of: solely activated charcoal ~~iron and aluminum oxide (Fe-alumina)~~.

Claims 57 - 61 (Canceled).